

Claims

- [c1] A method for facilitating a transport scheme in an automated material handling system environment, comprising:
- detecting an occurrence of a trigger event while monitoring production operations in an automated material handling system environment, said trigger event being user-defined;
 - identifying a materials candidate to purge from a production line in response to:
 - said trigger event;
 - production data captured relating to said materials candidate; and
 - user-defined criteria for purging materials from said production line;
 - selecting a disposition plan for handling said materials candidate;
 - generating a transport process job for said materials candidate operable for instructing said automated material handling system on executing said disposition plan; and
 - transmitting said transport process job to said automated material handling system for execution.

- [c2] The method of claim 1, further comprising updating production data to reflect activity conducted as a result of executed process jobs.
- [c3] The method of claim 1, wherein said trigger event comprises at least one of:
- a timestamp;
 - a full stocker;
 - a WIP level achieved;
 - a product type;
 - a process time; and
 - a throughput level.
- [c4] The method of claim 1, wherein captured production data includes:
- stocker identification;
 - stocker load;
 - stocker capacity; and
 - materials carried on said stocker.
- [c5] The method of claim 4, wherein said captured production data further includes performance metrics for a stocker, including at least one of:
- relative throughputs;
 - mean stocker cycle times for materials capacity;
 - peak stocker cycle times for materials;

stocker mean times between incidents;
stocker availability; and
alarm condition relating to at least one of:
carrier drops;
weight loads;
contamination control; and
charge build up on carriers.

[c6] The method of claim 4, wherein said captured production data further includes at least one of:
manufacturing process steps utilized on production materials; and
status of production activities occurring within a production area.

[c7] The method of claim 1, wherein said user-defined criteria includes:
an age of a product being manufactured;
type of product being manufactured;
a class of product being manufactured;
priorities established for scheduled materials as set out in a production schedule;
life span of materials in a production line; and
lots that have not been processed for a specified period of time.

[c8] The method of claim 1, wherein said disposition plan in-

cludes:

scrapping materials identified in said materials candidate;

transporting said materials candidate to a remote storage location; and

transporting said materials candidate to an alternate production area.

[c9] The method of claim 1, further comprising a user interface operable for defining said trigger event, said criteria, and said disposition plan.

[c10] The method of claim 1, further comprising:
parsing data relating to said materials candidate operable transforming said data into a format usable by said automated material handling system.

[c11] A storage medium encoded with machine-readable computer program code for facilitating a transport scheme in an automated material handling system environment, said storage medium including instructions for causing a server to implement a method, comprising:
detecting an occurrence of a trigger event while monitoring production operations in an automated material handling system environment, said trigger event being user-defined;
identifying a materials candidate to purge from a pro-

duction line in response to:
said trigger event;
production data captured relating to said materials candidate; and
user-defined criteria for purging materials from said production line;
selecting a disposition plan for handling said materials candidate;
generating a transport process job for said materials candidate operable for instructing said automated material handling system on executing said disposition plan;
and
transmitting said transport process job to said automated material handling system for execution.

[c12] The storage medium of claim 11, wherein said trigger event comprises at least one of:

a timestamp;
a full stocker;
a WIP level achieved;
a product type;
a process time; and
a throughput level.

[c13] The storage medium of claim 11, wherein captured production data includes:
stocker identification;

stocker load;
stocker capacity; and
materials carried on said stocker.

[c14] The storage medium of claim 11, wherein said captured production data further includes performance metrics for a stocker, including at least one of:
relative throughputs;
mean stocker cycle times for materials capacity;
peak stocker cycle times for materials;
stocker mean times between incidents;
stocker availability;
alarm condition relating to at least one of:
carrier drops;
weight loads;
contamination control; and
charge build up on carriers;
manufacturing process steps utilized on production materials; and
status of production activities occurring within a production area.

[c15] The storage medium of claim 11, wherein said user-defined criteria includes:
an age of a product being manufactured;
type of product being manufactured;
a class of product being manufactured;

priorities established for scheduled materials as set out in a production schedule;
life span of materials in a production line; and
lots that have not been processed for a specified period of time.

[c16] The storage medium of claim 11, wherein said disposition plan includes:
scrapping materials identified in said materials candidate;
transporting said materials candidate to a remote storage location; and
transporting said materials candidate to an alternate production area.

[c17] A system for facilitating a transport scheme in an automated material handling system environment, comprising:
a server executing an automated material handling system control application;
a data repository in communication with said server, said data repository storing:
trigger events operable for defining conditions for initiating a search for productions materials as candidates for purging;
purge criteria operable for defining conditions for executing a purge operation;

disposition operations operable for defining instructions for handling
production materials designated for purging; and
captured production data, said captured production data received from
production operations carried out on production materials occurring in said production area;
a production area in communication with said server via a communications network, said production area including:
at least one stocker carrying production materials;
at least one production bay including a process tool; and
at least one transport vehicle;
a purge tool executing on said server, said purge tool including:
a monitor component;
a user interface; and
a rules engine.

[c18] The system of claim 17, wherein said captured production data includes:
stocker identification;
stocker load;
stocker capacity; and
materials carried on said stocker.

[c19] The system of claim 18, wherein said captured production data further includes performance metrics for a stocker, including at least one of:

relative throughputs;

mean stocker cycle times for materials capacity;

peak stocker cycle times for materials;

stocker mean times between incidents;

stocker availability; and

alarm condition relating to at least one of:

carrier drops;

weight loads;

contamination control; and

charge build up on carriers.

[c20] The system of claim 19, wherein said captured production data further includes at least one of:

manufacturing process steps utilized on production materials; and

status of production activities occurring within a production area.